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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hans Leysieffer

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EXAMINER

HARPER, VINCENT PAUL

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/896,836	Applicant(s) LEYSIEFFER ET AL.	
	Examiner V. Paul Harper	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/13/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 96-114, 117-137 and 140-148 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 96-114, 117, 120-137 and 140 is/are allowed.
- 6) ☒ Claim(s) 143-148 is/are rejected.
- 7) ☒ Claim(s) 118, 119, 141 and 142 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 118, 119, 141 and 142 are objected to because of the following informalities: They depend from cancelled claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 143, 145-148 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zoels et al. (US Patent 6,047,074), hereinafter referred to as Zoels, in view of Boss et al. (U.S. Patent 5,933,805), hereinafter referred to as Boss.

Regarding **claim 143**, Zoels discloses a programmable hearing aid, which includes the following features (see MPEP 2111.02 for effect of the preamble, "fully implantable" has no affect on the following steps, see rejection of claim 96 for "fully implantable"):

- converting a sensed acoustical signal into an electrical audio signal (Fig. 1 items 2 and 4, col. 2, lines 1-6);
- processing said audio signal (Fig. 1, items 6 and 7, col. 2, lines 1-6) comprising:
 - stimulating one or more hearing structures of a recipient based on said artificial speech signal (col. 1, lines 9-11, an electroacoustical output transducer that will necessarily stimulate hearing structures); and

Furthermore, Zoels teaches the use of a programmable device [with necessary modules] where the modules can be replaced (consequence of being programmable) and adjusted (col. 5, lines 24-31), but Zoels does not specifically teach “detecting an extracting prosodic features from said audio signal with a first dynamic module; and converting said audio signal into an artificial speech signal based on said extracted prosodic features at a second dynamic module; allowing said first and second dynamic modules to optimize said processing.” However, the examiner contends that this concept was well known in the art, as taught by Boss.

In the same field of endeavor, Boss discloses a system for retaining prosody during speech analysis for later playback. Boss’s system includes a speech analyzer for detecting phonemes (abstract, Fig. 4, item 48, etc., first module) and a synthesizer for playback (Fig. 5 item 98, col. 2, line 61 through col. 3, line 19; also adjustments are made, col. 8, lines 65-67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Zoels by specifically providing the features, as taught by Boss, since it is well known in the art for the purpose of improving the

quality of the synthesized speech for hearing impaired individuals (Quagliaro, U.S. Patent 6,408,273, col. 3, lines 10-16).

Regarding **claim 145**, Zoels in view of Boss teaches everything claimed, as applied above (see claim 143). In addition, Zoels teaches “processing said audio signal without converting said audio signal into said artificial speech signal, and stimulating the one or more hearing structures of the recipient based on said non-converted audio signal” (col. 5, lines 20-44, the user can select between natural or technically generated signals to enable enjoyment [i.e., bypass processing], where when the ability to generate artificial speech is included, as taught by Boss, it would be obvious to include the selection process to bypass the synthesis operation, e.g., to enhance the quality of music heard).

Regarding **claim 146**, Zoels in view of Boss teaches everything claimed, as applied above (see claim 145). In addition, Zoels teaches “turning off said first and second dynamic modules to enable processing of said audio signal without converting said audio signal to said artificial speech signal” (see rejection of claim 145).

Regarding **claim 147**, Zoels in view of Boss teaches everything claimed, as applied above (see claim 145). In addition, Zoels teaches “allowing said first and second dynamic modules to automatically turn off to permit processing of said audio

signal without converting said audio signal into said artificial speech signal" (see rejection of claim 145).

Regarding **claim 148**, Zoels in view of Boss teaches everything claimed, as applied above (see claim 143). In addition, Zoels (and Boss) teaches "performing additional processing of said audio signal with adaptive signal processing algorithms" (Zoels, col. 2, lines 20-25, replacement program; Boss, col. 8, lines 64-67).

3. Claim 144 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zoels in view of Boss and further in view of Zenner.

Regarding **claim 144**, Zoels in view of Boss teaches everything claimed, as applied above (see claim 43). But Zoels does not specifically teach "reprogramming said first and second modules via wireless telemetry means." However, the examiner contends that this concept was well known in the art, as taught by Zenner.

In the same field of endeavor, Zenner teaches the use of a totally implantable hearing device for sensorineural hearing loss where the device can be programmed by induction (p.1, ¶2, i.e., controlled from outside the body).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Zoels by specifically providing the features, as taught by Zenner, because of the improved performance that can be realized by using such a structure (Zenner, p. 1, ¶1).

Response to Arguments

4. No arguments or amendments were presented for the previously rejected claims 143-148.

Allowable Subject Matter

5. Claims 96-114, 117, 120-137, 140 are allowable.
6. Claims 118, 119, 141, 142 are objected to do to for formal matters (see above objections), but would be allowable if the objections are appropriately handled.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Paul Harper whose telephone number is (571) 272-7605. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

8/24/07

VPH

V. PAUL HARPER
PRIMARY PATENT EXAMINER

A handwritten signature in black ink, appearing to read "V. Paul Harper", is written over the printed name and title.